Menlo Park Notebook [N-81-04-30] (unnumbered)

This notebook covers the period April-August 1881. There is also an entry for October 1881. All of the entries are by Edison and Charles T. Hughes. Most of the book contains notes by Hughes on experiments to preserve fruits and vegetables in a vacuum. There is also one entry by Hughes on a nickel plating experiment. The entries by Edison include a few notes on his family genealogy and what appears to be an account of a dream. There are also a few miscellaneous drawings by Edison. The left part of the label containing the notebook number has been torn off. The book contains 280 numbered pages.

Blank pages not filmed: 82-89, 98-101, 116-137, 140-147, 152-171, 178-277.

Missing page numbers: 79-80, 173-176.

XE172 N-81-04-30

Exp. 30, 1881

1

Bulb No 1 Strawberries from Florida 3 days en route 1 day in New York. Put on Pump at 10 o'clock P.M. Apl 30th Taken off at 3 A.M. May 1st 1881. 1014 good specimen

Bulb No 2 same as No 1 but left unpicked 48 hours

Bulb No 3 Strawberries got at the same time as No 1 & 2 but exposed to the air 36 hours longer 3½ hours moment exposed to the light. Taken from the Pump May 3rd 1881 at 12 22 P.M.

Bulb No 4 same as No 3

Bott No 5 Sure Florida berries four days picked carefully selected perfectly sound and quite fresh. Pig Kangs carefully. Taken from the Pump at 10½ PM May 7 1881

No 6 Same as No 5. But wrapped in Tissue Paper.

No 7 Strawberries four days picked sealed without exhausting at 3½ AM May 1st put same time as No 1 & 2

No 8 Same strawberries as Nos 5 & 6 exposed to the air while 5 & 6 were being exhausted. Pick on Pump at 10½ PM May 7 1881. Taken off at 1.05 AM May 8 1881 2½ hours vacuum tray fair

No 9 same as No 8 but
vacuum not so good,

Bulb No 10 strawberries,
four days bottom put on
Pump without Phosphoric Chamber with
straight tube instead of
crook. Got good vacuum
in 7 hours. Took off
Pump at 4½ PM May 30th 1881
Berries very fine.

No 11 Charleston strawberries very fine with a
few specks on them. Put on Pump without
Phosphoric straight tube
at 2 PM. May 4th 1881
Taken off 6 " " "
at 6 PM vacuum fair.
No 12 same as No 11

No 13 same strawberries as No 11 & 12 sealed without exhausting at 4 PM May 11th 1881.

No 14 same berries as 11 & 12 & 13. Pulse on Pump at 6 50 P.M. May 11th 1881 Pulse off at 8 50 PM vacuum very fair. Berries looked quite fresh and bright

May 5th 1881

Experiments with Tomatoes

Bulb No. 15

Two Tomatoes fully ripe six days picked. Picked green at Bermuda Island. Put on pump at 8'5 PM. May 5th 1881. Taken off at 8 45 PM with skin burst. ed. sealed and put away.

Bulb No 16.

One large perfect tomato of same lot put on at the same time. Taken off with skin burst at 8'0 PM May 5th 1881

Bulb No 17

Two small ripe tomatoes of same lot burst at same time. all three with straight tubes

No 18

Female of the same lot Put on at 9 hrs PM Taken off bursted at 10 30 PM May 5th Cut Ins

No 19 June 6 18 put on at 10 30 PM Cut tube bursted and filled with silk bubbles at 11 PM May 5th 1851.

No 20 Same as No 19 bursted at 11 30

No 21 Same Females sealed without exhausting.

No 22 Same

No 23 Same

May 6th 1881

Bull No 24 Alnwick Grapes
Tulley wipe stalk without
exhausting at 7½ PM
May 6th 1881

No 25 same as No 24.

No 26 same Grapes put
on Pump at 7½ PM
straight tube, make first
an appearance. Taken off
at 8½ PM May 6th 1881.
Passage stopped by a Grape.

No 27 same Grapes put on
at same time. Taken off
at 9 PM, Vacuum perfect.

No 28. Put on Pump
at 8½ PM. Taken off 11 PM.
Bulb which should have
been No 29, burst into
a thousand pieces after
being on the Pump two hours

No 29 Lunch chop.

Good specimen - in fine condition. Taken off Pump at 9 PM May 9th 1881 Sent to G. E. Gourand.

No 30 Porterhouse steak

The heart specimen was a little dark colored on one side as it was on outside piece. Sent to G. E. Gourand.

No 31 Sand snipe that had been on fog in NY when it reached New York it could hardly be called fresh. Had quite a gamey odor to say the least. Sealed in cloth specimen May 12th 1881 at 8 PM

No 32 same seeds as
No 31. Put on Pump at 7 30 PM. Taken off 9 30 PM
May 17th 1881

No 33 English Plover got at the same time as the seeds. Put much fresh seeds. Probably Grenich Chip had not been picked
Put on Pump at 7 30 PM
May 17th 1881. Taken off at 11 00 PM. Put in vacuum and sealed with air in

No 34. Same as No 33 but sealed without exhausting.

No 35. Strawberries from Charleston. Just quite fresh. Put into Bottle containing a little distilled water boiled in boiled. Put on Pump at 8 m Pm. Taken off at 9 m Pm May 13th 1881 very nice

No 36. Same berries under same conditions as No 35 Put on at 8 m Pm Taken off at 10 m Pm. May 13th 1881 Vacuum not very good. Pump defective.

No 37 Same berries with less water in bottle put on Pump at 8 m Pm Taken off at 10 m Pm May 13th 1881 Vacuum good berries very full in appearance

No 38 same berries that little distilled water. Put on Pump at 10 30 PM. May 13th 1881 Taken off at 12 00 May 1881 Berries very fine and fresh in appearance.

May 23d 1881

No 39. Delaware strawberries two days picked & quite fresh and perfect. Put on Pump at 7 00 PM. Taken off at 8 30 PM May 23d 1881 and put away in a dark place Vacuum 1½ hours and very good.

No 40 same berries. Put on Pump at 7 00 Taken off at 9 15 PM. Vacuum very good Pump took work as well as the other. Left exposed to the light

No moisture visible in either No 39 or 40 and both fresh and red in color.

No 41 contains a fine yellow Rose picked early in the Morning of May 23d 1881 and fairly fresh in appearance but the leaves on the bottom especially scorched by the glass. in blower when putting in leaves look brown on side next to glass but fresh and green on the other side. Put on at 9.00 P.M. Taken off at 9.30 P.M. and put away in a dark place. Vacuum very fair. Leaves of Rose curled slightly

No 1 2. yellow Rose without any leaves picked at the same time as No 1 quite fresh. Put on Pump at 9 00 PM. May 23d 1881 Taken off at 10 00 PM and left exposed to the light

No 1 3. Same berries as in No 39 & 40 Put on Pump at 9 30 PM. May 23d 1881 Taken off at 10 30 PM. Exposed to the light Look fine and red in color. No 1 4 H Same berries as 1 3 put on at 10 00 PM. May 23d Pump No 1 working finely Taken off at 11 00 PM May 23d 1881 Berries look and red No moisture exposed to light.

No 45. Same Corrie as No 44
Put on Pump at 11 PM
May 23rd 1881. Taken off
at 12 30 AM. May 24th 1881
Mercury stopped running
on account of bend in
tubing and got into bulb.
Partially exhausted
again and sealed off.
Caution! Don't eat.
Vacuum fair. Both Corries
have mercury in them.

1746. Fairly fresh berries
Put on Pump at 7 PM
May 26th 1881. sealed off
at 7 PM and Nitrogen
introduced. Vacuum very
fair until replaced by
Nitrogen. Berries look
natural and well. No
Moisture in the bulb.

1747 same berries Put
on at 7 PM. Sealed
off at 8 PM. May 26 1881
and bulb filled with
Nitrogen obtained from
burning Phosphorus in a
Bell Jar. Berries well and
fresh. No Moisture in bulb.
Leaves turned slightly
brown. Put away in the
dark.

No 48 Same Berries as in No 46 & 47. Put on Pump at 8 hrs PM. May 26th 1881 Taken off at 11 hrs PM Good vacuum. No ~~light~~ Nitrogen. Put away in a dark place. Berries quite fresh. No moisture in bulb.

No 49. Same Berries as No 48 kept on Ice over night. Put on Pump at 8 hrs AM May 27th Taken off at 9 hrs and filled with Hydrogen. a little moisture in bulb and berries not very fresh. Put away in dark place.

No 50. Same Berries Kept
over night on Ice. Put
on Pump at 9 30 a.M.
Taken off at 11 30 a.M.
Berries not very good
and some moisture on
bulb. One small Berry
No 51 is quite green. Exposed to
Gas
Tuesd. ex 50. Put
out Pump at 9 30 a.M.
Taken off at 11 50 a.M.
May 29th 1881. Berries
not in very good shape.
Leaves all wilted before
bring put on Pump
Kept in dark Place
Some moisture in bulb

May 26th 1881

Bet the Dinners with
Merill that Tuesday was
the 25th 1881. Lost and
paid little a man and
only repeat of it to
remark that my dates
were somewhat mixed
and that my first
Experiments with Nitro-
gen and Hydrogen were
on May 24th 188 instead
of May 26th and changed
the Bulb No 46 May 24th 1881
7 45 PM

No 47	May 24th 1881	8 45 PM
No 48 "	24th 1881	11 55 PM
No 49 "	25th 1881	9 15 AM
No 50 "	25th 1881	11 20 AM
No 51 "	25th 1881	11 50 AM

May 26th 1881

No. 52. Fresh berries same of three hardly ripe. Put on Pump at 2.00 PM sealed off at 3.00 PM and filled with Nitrogen leaving amount of moisture on glass. Look very fine Left exposed to light

No 53 Same berries as in No 52 Put on at 2.15 PM Taken off at 3.30 PM May 26th 1881 very good specimen. Berries look fine. No moisture on bulb. to speak of.

No 54 Same berries as in 52 & 53. Put on Pump at 3.00 PM May 26th 1881 Taken off at 3.45 PM. Look very fine. Scarcely any moisture in bulb left in sat

No 55 Same Berries put on at 3 30 PM May 26 1881
Taken off at 5 PM May 26
Sealed by Mercury

No 56. Same Berries put on at 3 40 PM May 26 1881
sealed off at 4 40 PM with good mercury and bulb filled with Nitrogen. Left exposed to the Light

No 57 Same Berries put on Pulsep at 4 30 PM May 26 1881
Taken off at 5 30 PM. and filled with Hydrogen.
Berries appear pale and red in color a little reaction in bulb. Left in dark

May 28th 1881

No. 58. Fresh Tissues. Put on Pump 3^40 PM. May 28th partially exhausted and bulb filled with Hydrogen and exhausted again. Refilled with Hydrogen and sealed off. at 4^40 PM May 28th 1881

Tissues fresh in appearance. A little of the original moisture on the glass. Left exposed to the Light.

No 59. Same Tissues put on Pump at 4^50 PM, got good vacuum and sealed off and introduced Hydrogen. Sealed off 5^10 PM May 28/81

Lack vacuum.

No. 60 Same Tubes Put on Pump at 6 30 P.M. May 28th 1881 partially exhausted and filled with Hydrogen and exhausted sealed off from Pump and re-filled with Hydrogen and sealed off. Tubes Test and red Taken off at 7 45 P.M. May 28th 1881 Lost Vacuum by explosion

No. 61 Same Tubes put on Pump at 6 30 P.M. Taken off at 7 10 P.M. May 28th 1881 No Hydrogen. Vacuum fair Tubes Test and red but a little moisture on bulb. Left exposed to the light.

May 28th 1881

No 62. Put on Pump at 7 50 PM May 28th 1881 got fair vacuum sealed off at 8 50 PM and filled with Hydrogen. Berries very fresh and Nourishing to speak of in bulb. Put away in a dark place.

No 63 same berries. Put on Pump at 8 50 PM. exhausted and filled with Hydrogen. Sealed off at 10 50 PM May 28th 188. Fresh and good. but little moisture in bulb. Put away in a dark place.

May 31st 1881 47

No 64. Strawberries fully ripe. Put on pump at 7 30 PM. Equal quantity of solution of Salicylic acid composed of 5 grains Sal. acid to one tumbler full of water. Taken off at 11 45 PM. May 31st. Put in dark. Berries quite fresh in appearance.

No 65. Cartons Butter made by Mrs Stillwell to day. Put on Pump at 3 10 PM. Taken off at 4 10 PM. May 31st 1881. Butter kept on ice until wanted for exhaustion. got very good vacuum. Same matter in bulb.

Put away in the dark

No 66. Same Berries. Same solution. Put on Pumps at 4 10/11 PM. May 31st 1881
Taken off at 5 10/11 PM.
Berries look pretty fair
Left exposed to light.
Vacuum good.

No 67. Same Berries and Solution. Put on Pumps at 4 10/11 PM. May 31st 1881
Taken off at 6 10/11 PM.
Look well. Left on Ice while others were being exhausted.
Left exposed to the light.
Berries fair but quite moist.

No 6 8 ~~May~~ June 1 1881

Brick Berries in bulb containing 10 grains Salicylic acid dissolved in a tumbler of water. Put on Pump at 12 50 P.M. Taken off at 1 30 P.M. Liquid boiled 30 minutes after being put on Pump and continued to for about ten minutes and stopped. Took good vacuum. Berries much shut Great looking. Exposed to the light.

No 69 same Berries put on and taken off Pump at the same time. Exposed to the light.

No 70

Same Berries and solution as 68 & 69. Kept on Ice while 65 & 69 were being extracted. Put on Pump at 7.30 P.M. Taken off at 11.00 P.M. June 1st 1881 and put in a dark place. Liquid in bulb boiled 30 minutes after being put on Pump stopped in a few minutes. Got good vacuum. Put away in the dark.

No 71 Same as No 70. Put on Pump at 7.30 P.M. Taken off at 11.0 P.M. Liquid boiled as in No 70. Berries dark green but are quite moist. Put away in the dark.

No 72 Cantaloupe Fresh green
Was Put on Pump at 12 Hrs 15 Min P.M.
Taken off at 2 Hrs 00 Min P.M. June 6th 1881
Was perfectly dry and
the same color when put
in a whitish green

No 73 String Beans. Put on
Pump at 12 Hrs 15 Min P.M. June 6th 1881.
Taken off at 2 Hrs 00 Min P.M. Beans
perfectly dry and same that
shriveled but quite green
in color.

No 74 Peas same as in No
72. Put on Pump at 2 Hrs 00 Min P.M.
Taken off at 4 Hrs 10 Min P.M.
June 6 1881. Look fresh as
when put in and perfectly
dry. Vacuum not good
Pump would not work

No 75 Same Prac. Put on pump at 7 00/00 PM. June 6th 1881
Taken off at 5 30/00 PM.
Dry and fresh looking.
Vacuum good

No 76. Same Prac. Sealed with out exhausting. at 4 00/00 PM. June 6th 1881.

No 77. Georgia natural Peaches
Hardly fully ripe but in
fair condition. Put on Pump
at 7 H 30 PM June 22d 1881
Taken off at 6 00 PM June 23d
Pump not very good
Vacuum fair slight moisture
on glass.
No 78 Same Peaches as in No
77. Put on Pump at ~~June~~
~~June~~ 8 10 AM June 23d 1881
Peaches just on the point
of decay. one nearest bottom
brown and soft about one
inch in diameter. No moisture
in Jars. Taken off at 12 00 PM.
Good Vacuum in Sealing.
No 79 Same Peaches Put on at
8 10 AM Taken off at 12 15 PM.
Vacuum not very good Pump
not working well. No moisture

No 80 Aug 5th 1881

Small tube Packer quite fresh with common Charcoal put on Punk at 10 20 AM Taken off at

P.M. Brooke

No 81 Same Packer in bulb containing Alcohol Lower end had commenced in it Put on Punk at 10 20 AM Alcohol began to fail in ten minutes after being put on

Brooke

Aug 5th 1881 63

#080 Bubs containing ripe Peaches and Alcohol. Put on Pump at 1930. P.M. Commenced to boil in ten minutes and continued to boil.

#081

Same Peaches in a solution of Salicylic Acid 10 grs. to a Pint of water. In each case the lower peach was almost entirely immersed in the liquid. Put on Pump at 1930 P.M. Taken off at P.M. I boiled

No 80 Peaches and Sugar in bulk. Put on Pump at 1 00 P.M. Taken off at 3 00 P.M. Good vacuum Sugar a little moist Peaches fine in appearance.

No 81 Peaches & Soap. Put on Pump at 3 15 P.M. failed Not enough Vacuum

No 81 Peaches & Salt Put on Pump at 3 00 P.M. Taken off at 4 00 P.M. Vacuum Fair but moisture coming from Peach which is not the thing in Salt

No 82 Leaches in bulb with charcoal put on Pump at 11.50 PM. Taken off at 5.50 PM. Very Good Pack working Pump. Leaches dry and nice in appearance

No 83 Aug 11th 1881

Leaches and Alcohol Put on Pump at 8.30 PM Taken off at 10.00 PM. Vacuum fair. Liquid boiled in ten minutes.

No 84 Leaches & Charcoal Put on at 10.00 PM. Taken off at 12.00 PM. Vac not very good. Pump not working well.

Aug 12th 69

No 85 Peaches & Charcoal
Piece half turned by
standing in warm room
Put on Pump at 3 00 P.M.
Taken off at 5 00 P.M.
one side looks well.

No 86. Aug 12th
Large bulb with Peaches
and Carbonized paper
Put on Pump at 8 45
A.M. Taken off at 7 45
P.M. Same moisture in bulb but peaches look quite good although about five days old.

No 87 Bulb containing Peaches covered with carbolized wheat hulls and sealed at 11.55 A.M. with auch exhausting.

~~No 88 Same Peaches as~~ in No 87 ~~with Solution of Salicylic Acid~~

No 89 Same Peaches with carbolized wheat hulls. Put on Pump at 3.10 Taken off at 4.20 Good Vacuum.

No 88 Same Peaches nothing else Put on Pump at 1.55 PM Taken off at 5.30 PM Considerable moisture in bulb from Peach.

No 90 Aug 17th 1881

Same Peaches with carbonized wheat hulls Put on Pump at 4.20 PM Taken off at 6.00 PM good vacuum.

Aug 19th 1881

No. 91 Peaches and Salicylic acid Put on Pump at 2.00 PM. Taken off at 4.00 PM. Lower Peach showed a wickered appearance in ten minutes after putting on and liquid began to boil. Peach not in contact with liquid. Fresh and good.

No Pump.

No 92 Peaches & Salicylic acid. Put on Pulp at 3 40 P.M. Taken off at 5 30 P.M. Peaches fresh and good. Vacuum good.

No 93 Peaches & Salicylic acid. Put on Pulp at 2 50 P.M. Taken off at 5 20 P.M. Very fair Vacuum.

Oct 20th 1881

Nickel Plating Experiments on the flat sides of rails for perfect contact in connecting. Also plating fish plates & copper bars. Put rail in Sulphuric Acid for half an hour, then in Sulphate of Copper Solution. Then in Nickel Solution.

Fish plates & copper stick treated in the same manner. Worked well.

300

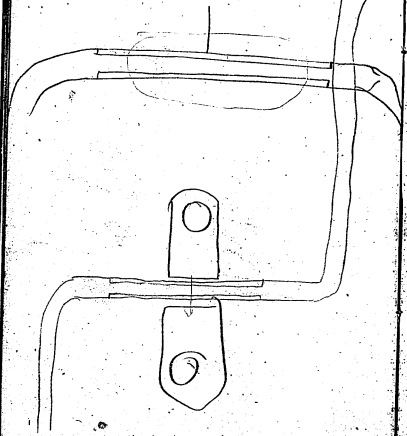
275

.3

25
.3
7.5

175

300



33.000 lb

30

450 | 99000

1983

3 | 2200

70

Scrot

Bals

22000 lb

15

3

11

165

450

22000

11 0000

550.000

183

16

23

1350

1080

270

239.800

79

75

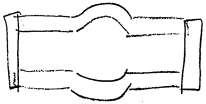
2. 30" 52.80 | 9.

216

30
9 | 65.3680
90
65.3680
90

9 | 65.3680
70.2
2.50

Effi. 10



600 − 50
450 = 1000 / .6 = 170 amp.
1,000
17.000

300
600 − 550

What is efficiency at 23 HP

300 − 25
275 = .3 R amp.

at 250 volts 250 / 3 = 83 amp.

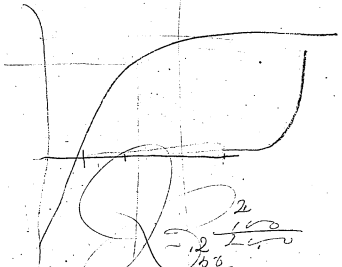
200 = 75 / .3 240
75
1200
1680
746 | 20.75 | 3 HP
25
4.15
36

250 746 | 18.000 | 23.
1492
3080

275 | 2000 | 7
2.00

$$\begin{array}{r} .2 \\ 50 \\ \hline 10.0 \end{array} \qquad \begin{array}{r} .2 \\ 100 \\ \hline 20 \end{array}$$

$$\begin{array}{r} .2 \\ 200 \\ \hline \end{array}$$

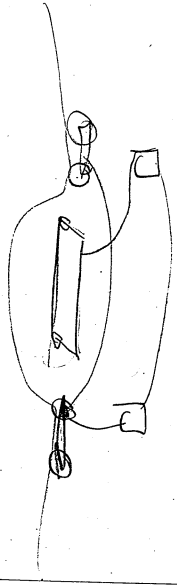


$$\begin{array}{r} .2 \\ 100 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} -.2 \\ 100 \\ \hline 1.00 \end{array}$$

$$\begin{array}{r} .2 \\ 2.0 \\ \hline 10.0 \end{array}$$

.02

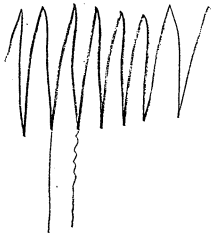


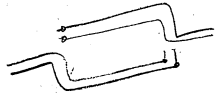
Boulevard St Antoine that damnable
merchants of inhumanity. Citerian
wharfrats Why Centerina don't run a
line already greased from Sirius to
Capella with angularity, ten million
devils slide down to the farthermost
bog and piss into pandemonium
Tell me winged soldier of Hell
of in the farthermost ends of infinity
wanted demons with cavernous
mouths spit saliva on the balls
of ~~[illegible]~~ the firmament to produce
deluges, has seen the grief-errant
he shocks ~~[illegible]~~ the angel of
desolation, amuses himself by
letting off fire works on
powder kegs, Citronella this
damned perfume on the lime
clad hills of Andalusia
wafted as from a garden
filled with Red Hot
giraffes a Rain of Bouchon

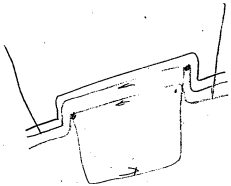
Soup descended on the thirsty
soil and the wells and snake
holes poked ~~[illegible]~~ miasmatic
water from the rudness of the
rapost pruthee tell Centenno
we of the finite minds, of Vesuvius
constipated from derangement of the
Terrassian kidneys will ever
vomit up again ~~to~~ engulf ~~the~~ more Earth lice
They tell me the milky way is
formed of stars + planets so numerable,
+ its diameter so great that
if adam was one and all the
bands of the sea were cystem
they would not suppose a freaptible
acgment of the great ring -
Doth god have a pegasus
+ see the milky way as a
hitching ring
Whizzozzizzum an asteroid
has run plump into ~~a~~ favorite
angel, This Crank

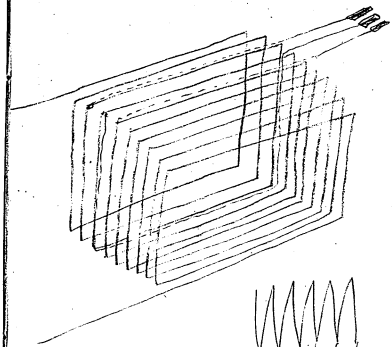
lumps of matter will be used
for a water closet in Hell
two angels at a Candy pull,
they stretch the vicious molasses
from Vega to Saturnus at every
pull, flies as big as Japan
buzzed around it,
a Bowery angel smoking a
palm tree stubbed his toe
on a Comet, and pimples came
out on his toe nail as big as
mountains, he swore so much
that God made Eight new
planets out of the Concreation
& peoples and founded &
floored them. Eccentrically
the almighty has a vein of
humor he make three
planets & peoples them

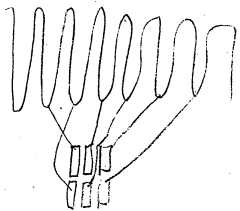
to give announcements to beings on
the rest of the celestial globe [illegible]
The men were 900 miles long
+ $\frac{1}{4}$ inch thick they slept on
telegraph poles, and animals,
with bodies as big as a pea
with 900 eyes each as big as a
ounce lives on these long men
by catching them by the feet or
sucking them in like macaroni,
In the most [illegible]
Dwindle amid [illegible]
More beautiful than [illegible]
Cinnamon, in a palace [illegible]
Gabriel [illegible]
Each endowed with a [illegible]
Capable of [illegible] that which
De Quincey, [illegible] the abram 30 miles
in diameter full of opium would
[illegible]

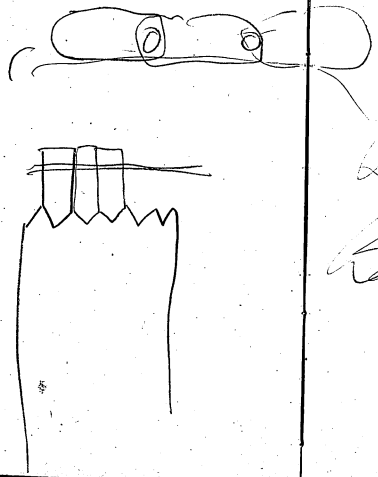








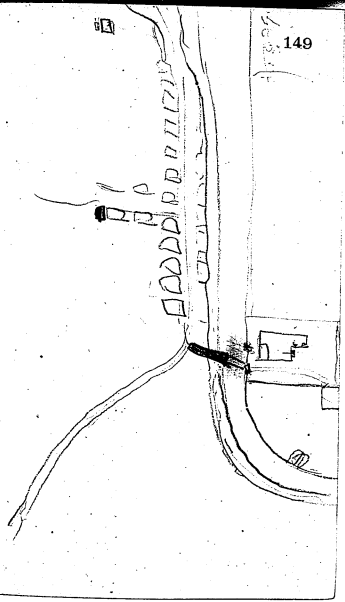




Bals

Bals

Captain Ebenezer Elliott -
fought all through the Revolutionary war
7 years —
Born -
My grandmother Elliott.
was named Mercy Peckham
born in Stonington Conn -
her father was a scotch
quaker —
Capt Ebr Elliott drew his
pension from Buffalo &
lived in Vienna till
death, lived little
over 100 years —



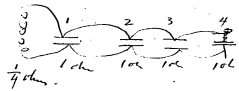
grandfather Elliot had
3 daughters. Fanny. —
Betsey 84 — Nancy — 65
Sons — Stephen, Isaac —
John Elliott,

Samuel E married
Nancy Elliott 1828

Isaac 88 yrs —
John 51 yrs
Stevs — very old —

51 — 49.
22
71 —

72


1
2
3
4
1 ch
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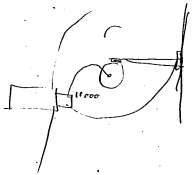
1/4 ch


1 ch

Sunday June 12th 1881.

Put a piece of cast iron in receiver exhausted the air, heated to bright red heat, and admitted air to enter through the strang and burnished the iron shaving.

Monday June 13th 1881.

Had cast iron shaving put into a lump bulb and exhausted the air with Mercury pump. Let the current through it and heated to a bright red and let air in and exhausted again. Repeated the process three times and took out. Iron was apparently malleable Hammered it flat.

Young

Jesus